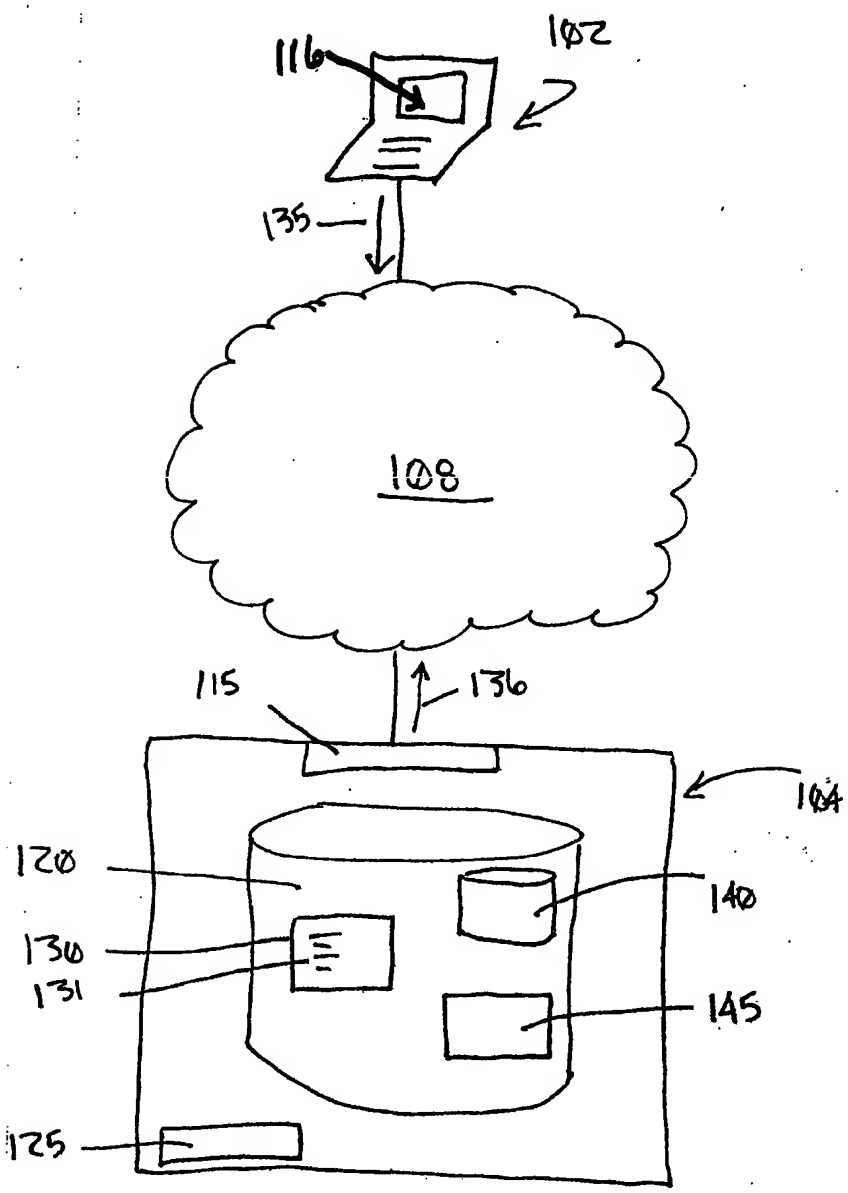

FIG. 1

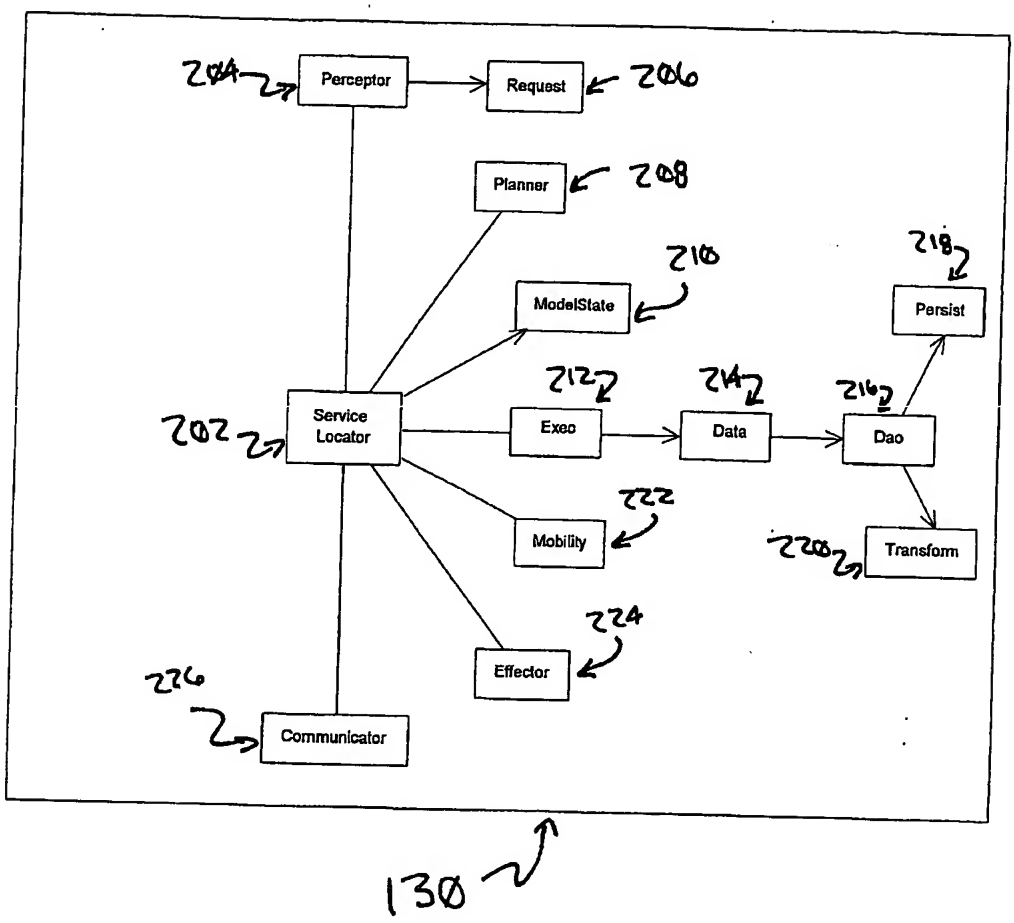
204
Perceptor
Request
206
Planner
208
210
ModelState
218
Persist
212
214
216
Service Locator
202
Exec
Data
Dao
222
Mobility
220
Transform
224
Effector
226
Communicator
130

Fig. 2

300

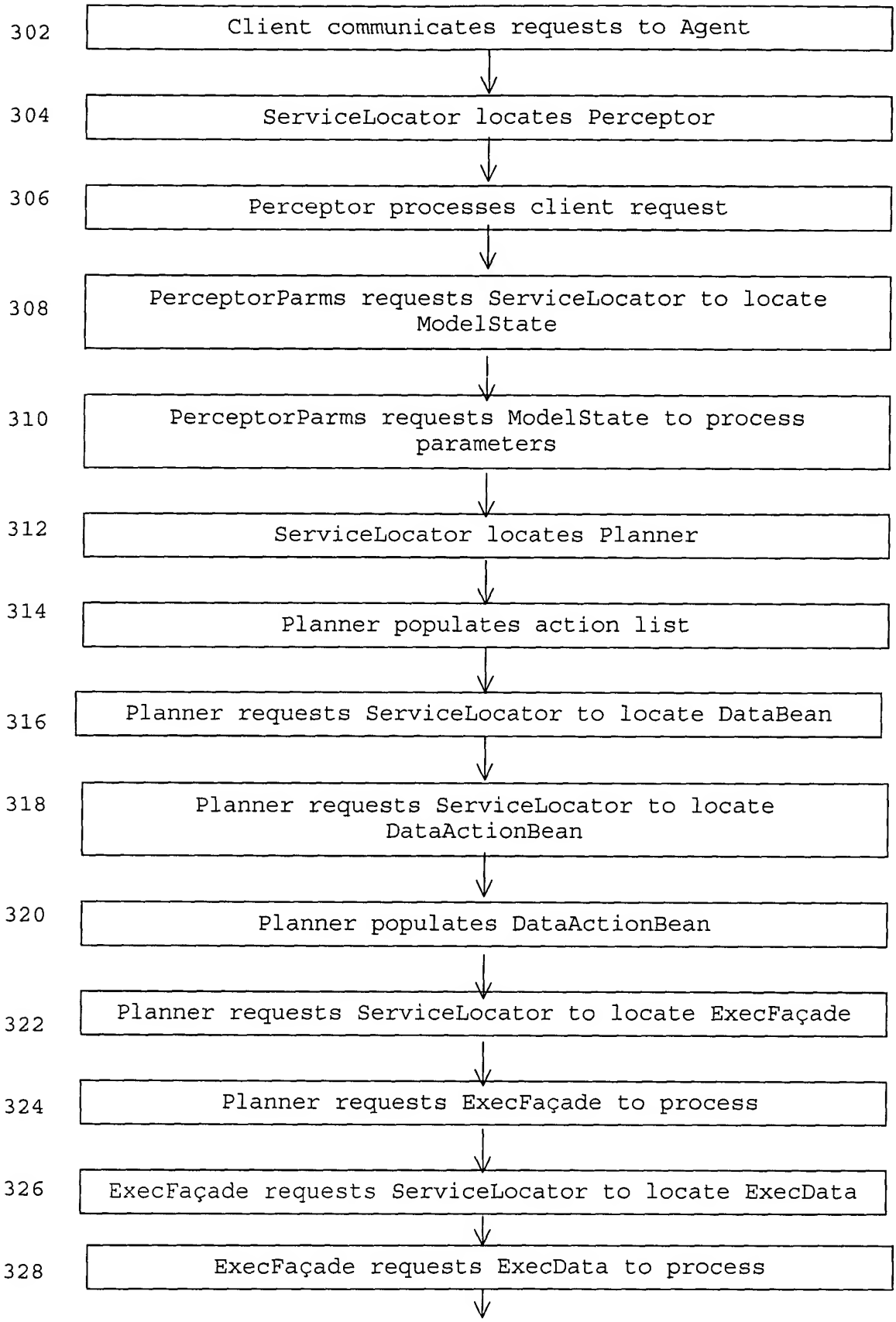
302
Client communicates requests to Agent
304
ServiceLocator locates Perceptor
306
Perceptor processes client request
308
PerceptorParms requests ServiceLocator to locate ModelState
310
PerceptorParms requests ModelState to process parameters
312
ServiceLocator locates Planner
314
Planner populates action list
316
Planner requests ServiceLocator to locate DataBean
318
Planner requests ServiceLocator to locate DataActionBean
320
Planner populates DataActionBean
322
Planner requests ServiceLocator to locate ExecFaçade
324
Planner requests ExecFaçade to process
326
ExecFaçade requests ServiceLocator to locate ExecData
328
ExecFaçade requests ExecData to process

Fig. 3A

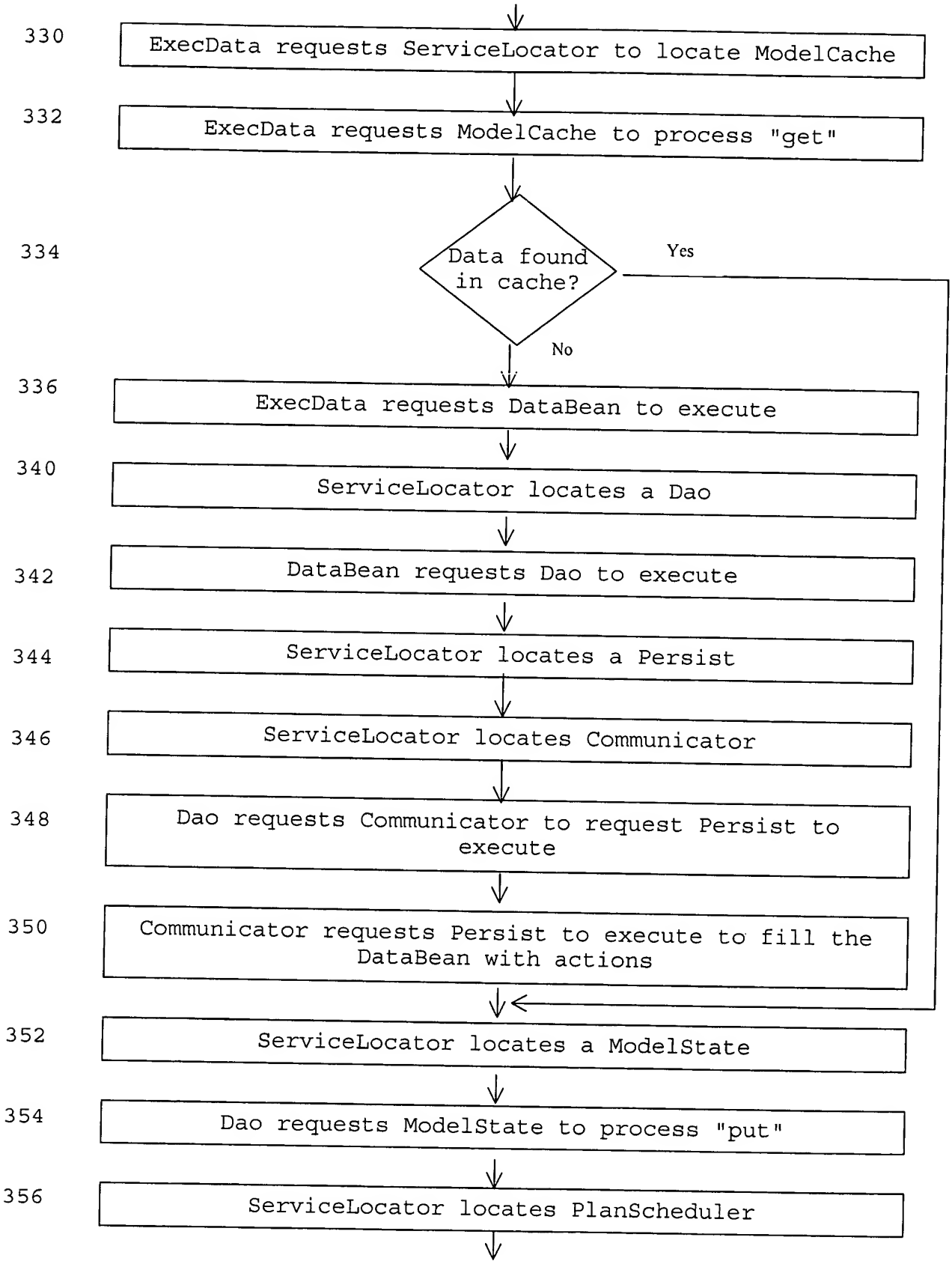
330
ExecData requests ServiceLocator to locate ModelCache
332
ExecData requests ModelCache to process "get"
334
Data found in cache?
Yes
No
336
ExecData requests DataBean to execute
340
ServiceLocator locates a Dao
342
DataBean requests Dao to execute
344
ServiceLocator locates a Persist
346
ServiceLocator locates Communicator
348
Dao requests Communicator to request Persist to execute
350
Communicator requests Persist to execute to fill the DataBean with actions
352
ServiceLocator locates a ModelState
354
Dao requests ModelState to process "put"
356
ServiceLocator locates PlanScheduler

Fig. 3B

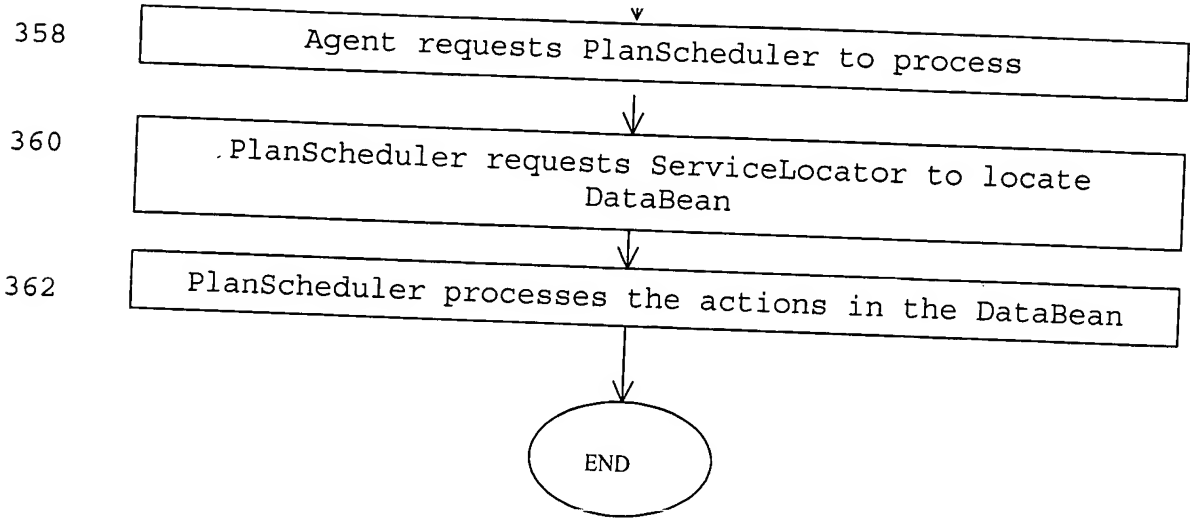
358
Agent requests PlanScheduler to process
360
PlanScheduler requests ServiceLocator to locate DataBean
362
PlanScheduler processes the actions in the DataBean
END

Fig. 3C

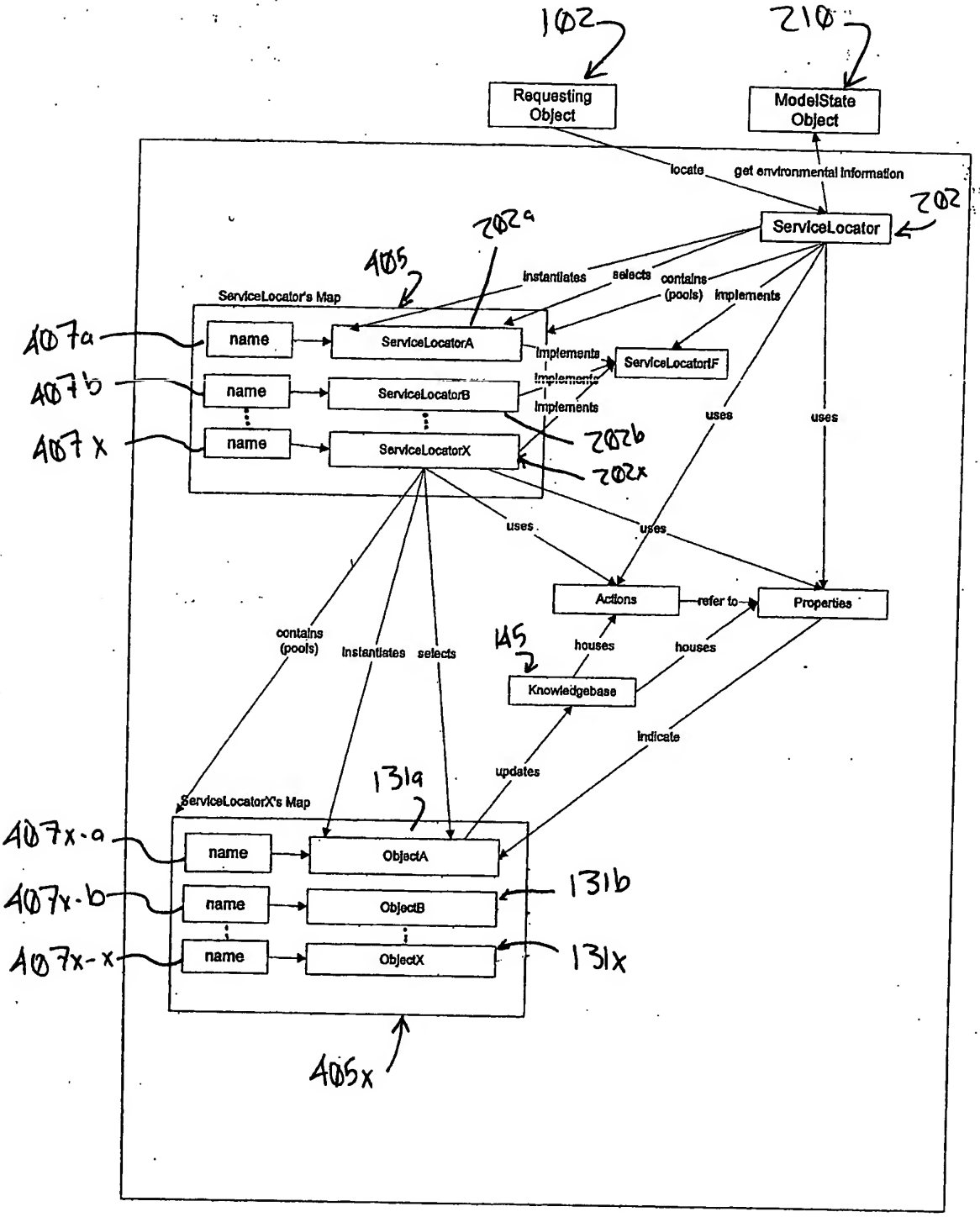
102
210
Requesting Object
ModelState Object
locate
get environmental information
202
ServiceLocator
202a
405
instantiates
selects
contains (pools)
implements
ServiceLocator's Map
407a
name
ServiceLocatorA
implements
ServiceLocatorIF
407b
name
ServiceLocatorB
implements
407x
name
ServiceLocatorX
202b
202x
uses
uses
uses
uses
Actions
refer to
Properties
contains (pools)
instantiates
selects
145
houses
houses
Knowledgebase
indicate
updates
131a
ServiceLocatorX's Map
407x-a
name
ObjectA
131b
407x-b
name
ObjectB
131x
407x-x
name
ObjectX
405x

FIG. 4

500

3

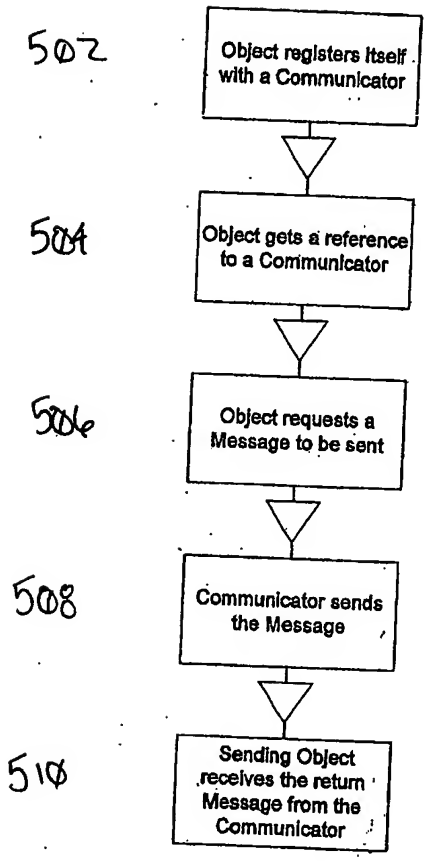
502
Object registers itself with a Communicator
504
Object gets a reference to a Communicator
506
Object requests a Message to be sent
508
Communicator sends the Message
510
Sending Object receives the return Message from the Communicator

FIG. 5

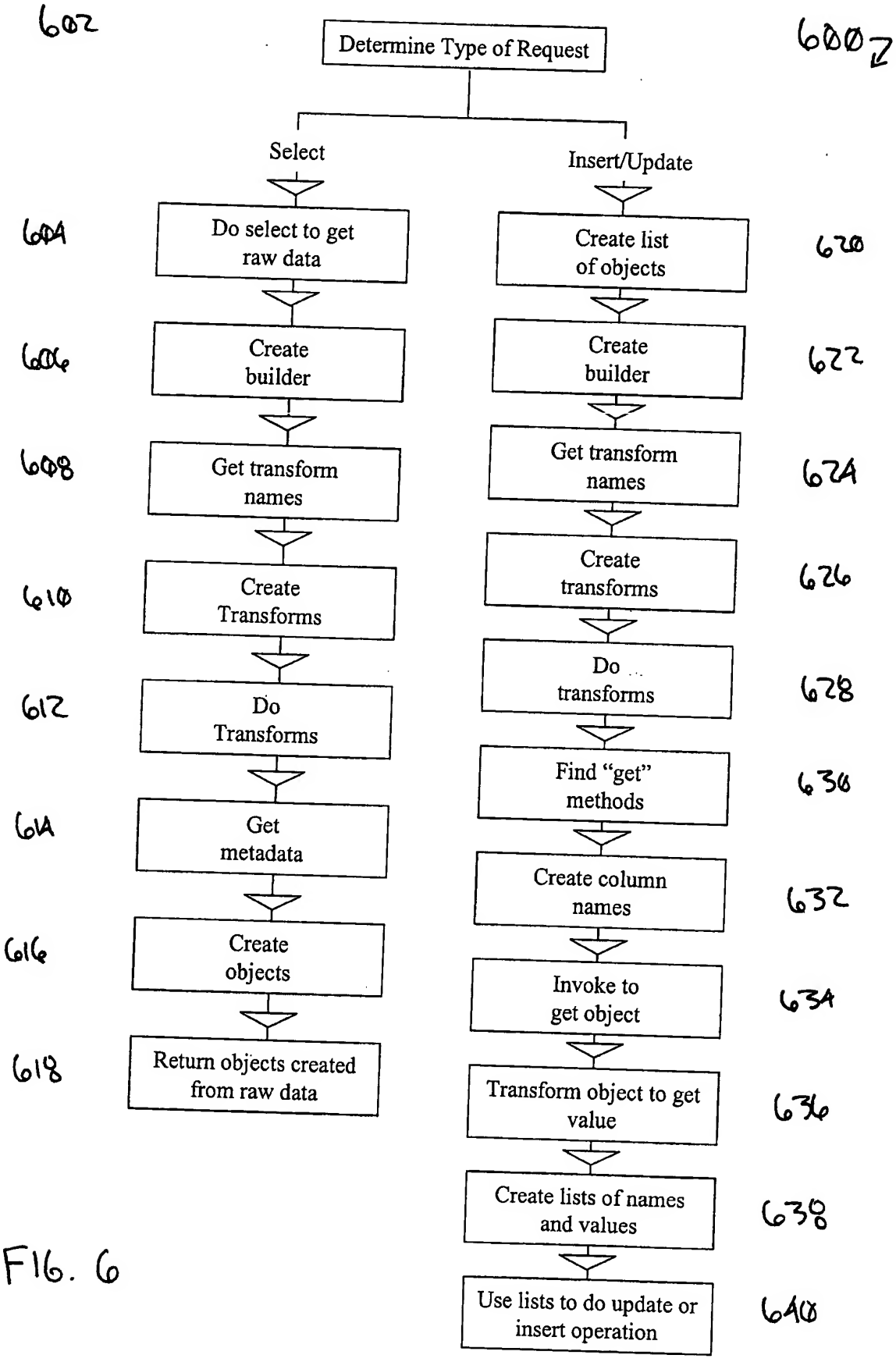
602
Determine Type of Request
600Z
Select
Insert/Update
604
Do select to get raw data
606
Create builder
608
Get transform names
610
Create Transforms
612
Do Transforms
614
Get metadata
616
Create objects
618
Return objects created from raw data
620
Create list of objects
622
Create builder
624
Get transform names
626
Create transforms
628
Do transforms
630
Find "get" methods
632
Create column names
634
Invoke to get object
636
Transform object to get value
638
Create lists of names and values
640
Use lists to do update or insert operation

FIG. 6

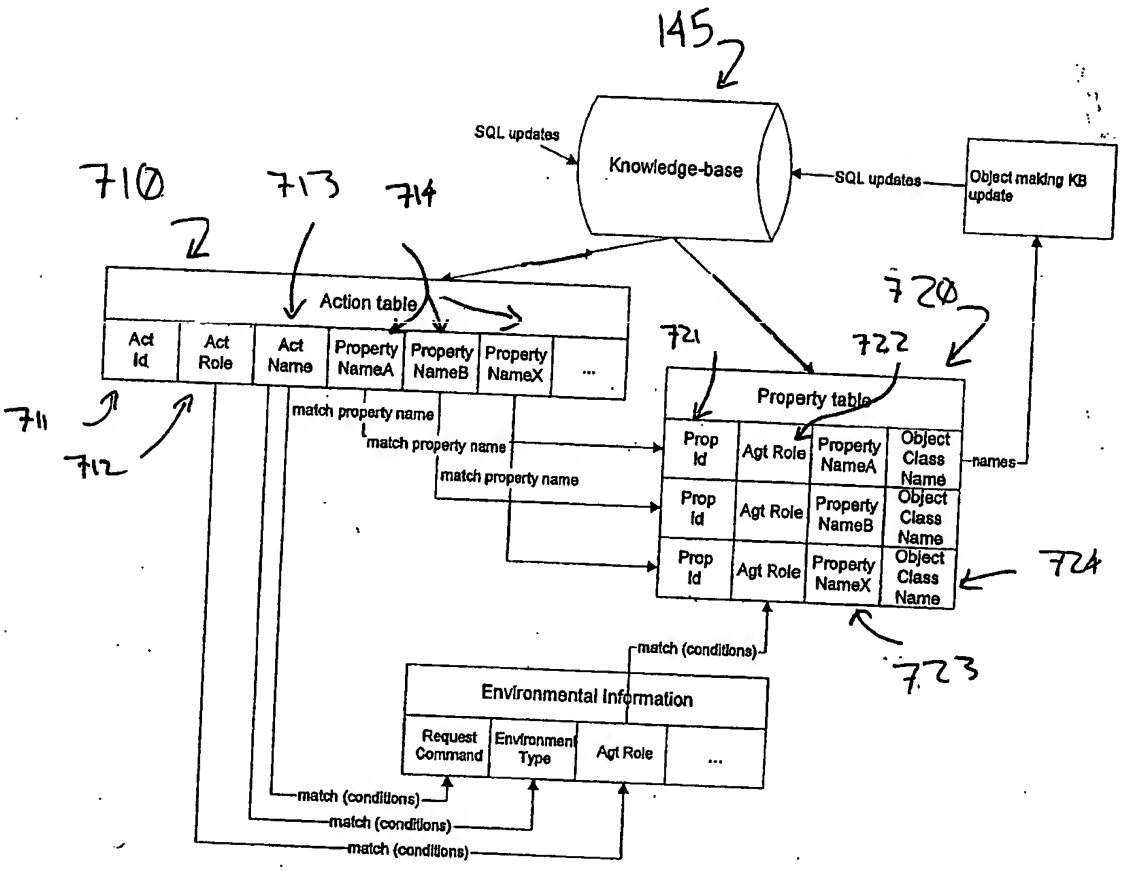
145
SQL updates
Knowledge-base
SQL updates
Object making KB update
710
713
714
720
721
722
Action table
Act Id
Act Role
Act Name
Property NameA
Property NameB
Property NameX
...
711
712
match property name
match property name
match property name
Property table
Prop Id
Agt Role
Property NameA
Object Class Name
Prop Id
Agt Role
Property NameB
Object Class Name
Prop Id
Agt Role
Property NameX
Object Class Name
names
724
723
match (conditions)
Environmental Information
Request Command
Environment Type
Agt Role
...
match (conditions)
match (conditions)
match (conditions)

FIG. 7